

A NEW SET OF CLAIMS FOR SUBSTITUTION UNDER ARTICLE 19

5 What is claimed is:

22. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture, wherein the carbon flexible heating structure is a reinforcing material of a conductive composition filled with short staples.

10 23. The carbon flexible heating structure of claim 22, wherein the diameter of the short staple is 1 through 50 μm and the short staple is one of a glass fiber, a carbon fiber, and a graphite fiber.

15 24. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture, wherein the carbon flexible heating structure has the shape of a mesh, and
20 wherein the mesh is a fabric made of a woof and a warp and has port portions formed longer than the woof or the warp of the fabric, and the port portions are formed of a conductive metal wire having superior conductivity.

25 30 25. The carbon flexible heating structure of claim 24, wherein the port portions are tin-plated copper wires or silver wires.

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26. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture,
5 wherein insulation coating formed of an insulating mixture

10 obtained by mixing liquid silicon rubber and a diluent and agitating a mixture is provided on a surface of the carbon flexible heating structure.

15 27. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and graphite powder at a weight rate in a range of 100:10~150 into a particular shape and curing a mixture,
wherein the carbon flexible heating structure is a reinforcing material of a conductive composition filled with short staples.

20 28. The carbon flexible heating structure of claim 27, wherein the diameter of the short staple is 1 through 50 μm and the short staple is one of a glass fiber, a carbon fiber, and a graphite fiber.

25 29. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and graphite powder at a weight rate in a range of 100:10~150 into a particular shape and curing a mixture,
wherein the carbon flexible heating structure has the shape of a mesh, and wherein the mesh is a fabric made of a woof and a warp and has port portions formed longer than the woof or the warp of the fabric, and the port portions are formed of a conductive metal wire having superior conductivity.
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35 30. The carbon flexible heating structure of claim 29, wherein

the port portions are tin-plated copper wires or silver wires.

31. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber 5 and graphite powder at a weight rate in a range of 100:10~150 into a particular shape and curing a mixture,

10 wherein insulation coating formed of an insulating mixture obtained by mixing liquid silicon rubber and a diluent and agitating a mixture is provided on a surface of the carbon flexible heating structure.